REMARKS

At this time, applicants would like to thank Examiner Mertz for her time and consideration in discussing the present application with the undersigned on several occasions.

Accordingly, claims 89-91 and 101-118 are pending in the present application. Claims 1-88 and 92-100 have been canceled. While claims 89-91 remain in the application, applicants have added new claims 101-118, and file an RCE with this amendment, as suggested by the Examiner. Support for new claims 101-118 may be found in claims 89-91 and generally throughout the specification.

In the outstanding Official Action, claims 89-91 were rejected under 35 USC §112, first paragraph, for allegedly failing to comply with the enablement requirement. This rejection is respectfully traversed.

Applicants believe that the Patent Office fails to meet its burden in showing that the claimed invention is not enabled by the present disclosure. While the Patent Office alleges that colony formation suppression (decrease of numbers of colonies) does not correlate to differentiation suppression, applicants believe that one of ordinary skill in the art would conclude that differentiation suppression can be extrapolated at least from the results set forth in Examples 10, 11 and 12 found in the present specification.

The colony assay in Example 10 correlates to the assays found in the article by GORDON, *Human Haemopoietic Stem Cell Assays*, "Direct Clonogenic Assay, Colony forming Units for Granulocytes, Erythroid Cells, Monocytes and Megakaryocytes (CFU-GEMM) (pg. 191-192), and the article by MOORE, *Clinical Implication of Positive and Negative Hematopoietic Stem Cell Regulators*, "BFU-e, CFU-GM, CFU-GEMM" (pg. 2).

In GORDON at pg. 191, it is stated that

> Clonogenic assays are the most directly quantitative means of measuring human haemopoietic progenitor cells in vitro. Haemopoietic colonies are essentially clones of cells produced by a single progenitor cell. The colonies can be analysed morphologically and by replating the cells they contain into different clonogenic systems to obtain information about the self-renewal and differentiation potential of the colony-forming progenitor.

Thus, the assays of the present examples are considered as capable of determining differentiation suppression. The results of example 10 indicate suppression of colony formation (small number of colonies) as compared with the results obtained when Serrate-1 is not added.

Moreover, the colony formation after long term liquid culture (LTLC) in Example 11 of the present invention corresponds to an assay utilized by GORDON, *Human Haemopoietic Stem Cell Assays*, "Secondary Colony Formation, Long-term Bone Marrow Culture (LTBMC) and Long-term Culture-initiating Cells (LTCIC) (page 193)".

This shows the colony formation of cells after a long-term culture (secondary colony formation). As a result, numbers of colony forming cells after the culture were found to be in larger amounts than with conditions that add MIP-1α but do not include Serrate-1.

In Example 12, long-term culture initiating cells (LTCIC) after LTLC were examined. Example 12 shows that the numbers of LTCIC (frequencies) were larger than those without adding Serrate-1.

Moreover, at this time, while applicants do not disclaim any potential applications relating to the new claims, applicants note that non-narrowing claims 101-118 are directed to methods for suppressing colony formation of blood precursor cells in vitro. Thus, applicants believe that the claims are fully supported by the application.

Thus, as the Office Action fails to present any evidence to the contrary and the present disclosure utilizes art accepted assays to determine differentiation suppression, applicants believe that the claimed invention is enabled by the present disclosure.

Claims 89-91 were rejected under 35 USC §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. This rejection is traversed.

In imposing the rejection, the Office Action contends that the claims are indefinite because the terms are redundant. However, while the terms "blood precursor cells" and "hematopoietic stem cells" may overlap, the terms are definite to one skilled in the art. Indeed, it appears the Office Action does contend otherwise and understands the scope of the terms. Thus, applicants believe that the claims are definite to one skilled in the art.

In view of the present amendment and the foregoing remarks, applicants believe that the present application is in condition for allowance. As a result, applicants request the allowance and passage to issue of the present application.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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